



*Chapter Outline:*

## **4.0 Trail Alignment Methodology**

*4.0 Trail Alignment  
Methodology*

*4.1 Trail System Overview*

*4.2 Trail System by Section*

The development of the recommend trail system was guided by a combination of proposals from existing plans, the 2004 MST-East Workshops, field analysis of opportunities and constraints, and input from the client team (The Town of Clayton, Town of Smithfield, Johnston County, the North Carolina Department of Transportation Bicycle and Pedestrian Division, and the North Carolina Department of Environment and Natural Resources). Input from all of the above sources was synthesized into a draft set of recommendations and then refined, using the five steps described below.

### ***4.0.1 Identifying Opportunities***

All existing public parks, trails, easements, and dedicated open space within the project corridor were collected from federal, state, county, municipal, and non-profit sources. These locations were identified as opportunities for trail alignment. Additionally, other public lands were considered as potential partners in trail development, such as county schools and vacant town properties. Finally, large, single-owner agricultural tracts were regarded as having a higher potential for future trail alignment than most other non-public land uses.

### ***4.0.2 Identifying Constraints***

The next step was identifying areas that the trail could not traverse, such as heavy-industrial areas, a correctional facility, a water treatment plant, and highways with no feasible means to cross. Similarly, environmentally sensitive areas, such as wetlands and lands identified as “Environmentally Sensitive Area Districts” (See Appendix A) were considered less appropriate for the proposed trail’s 10-foot paved cross section. Also, while proximity *to* subdivisions was considered as an opportunity for connectivity, trail alignment *through* them was considered as a constraint to be avoided, due to the higher density of separate and individual private parcels.

### ***4.0.3 Weighing the Opportunities and Constraints***

After determining the major obstacles and opportunities for the trail's alignment, it became clear that the east side of the Neuse River is the most feasible for the majority of trail (see pages 22-29). This is due to the east side's existing easements, town-owned properties and existing trails. Conversely, the west side of the river contained less existing opportunities for public access, and instead, more constraints. The State Correctional Facility, the Johnston County Water Treatment Facility, and a future Town of Selma rock quarry are all located on the west side of the river. Incidentally, if the trail were aligned away from the river and around two of these obstacles, then either an at-grade trail crossing at both US 70 and the railroad would be required, or an expensive grade-separated crossing would be required at each.

### ***4.0.4 Determining Trail Access to the Towns***

Many of the benefits of the MST, such as the economic, transportation, health, and quality of life benefits, depend upon the trail connecting to local users and destinations (See Chapter 2). Hence, connecting the MST to the Towns of Clayton and Smithfield became a major component in deciding upon trail alignment in Johnston County. For example, while most trail opportunities are on the east side of the river, the trail crosses to the opposite side in Clayton, in order to ensure that residents have access to the trail and that trail users have access to the Town. In Smithfield, the choice for a town connector was clear, as the construction for the Buffalo Creek Greenway will begin very soon. Some in-town portions of trail will consist of sidewalks and bicycle routes that are marked with MST signage. This strategy takes advantage of existing downtown bicycle and pedestrian facilities, while allowing trail users to easily connect back to the MST.

### ***4.0.5 Evaluating Overall Trail Connectivity***

As decisions were made regarding trail alignment, overall connectivity was taken into account. For example, if opportunities (parks and greenways) are located on one side of the river, and constraints (an industrial area and a highway) are located on the other, then it makes sense to continue the route where opportunities connect and constraints are avoided. Evaluating each opportunity and constraint helped to form a rational basis for the overall routing of the trail.

## 4.1 Trail System Overview

The MST for Johnston County will consist of a mainline running primarily along the east bank of the Neuse River. Various town trails are included in this plan that connect the MST to the Town of Clayton, the Town of Smithfield, and possibly to the Town of Selma (depending on the Town of Selma's interest in connecting to the system). A water-based trail, or 'Blueway' already runs the length of the project corridor. This plan also recommends new drop-in water access points near Covered Bridge Road and Wilson Road (aka Fire Department Road), and enhancements to the existing access points at NC 42 and Smithfield Town Commons.

*Refer to Appendix B for Trail Design Guidelines*

### 4.1.1 Trail Types

#### *Multi-Use Paved Trail*

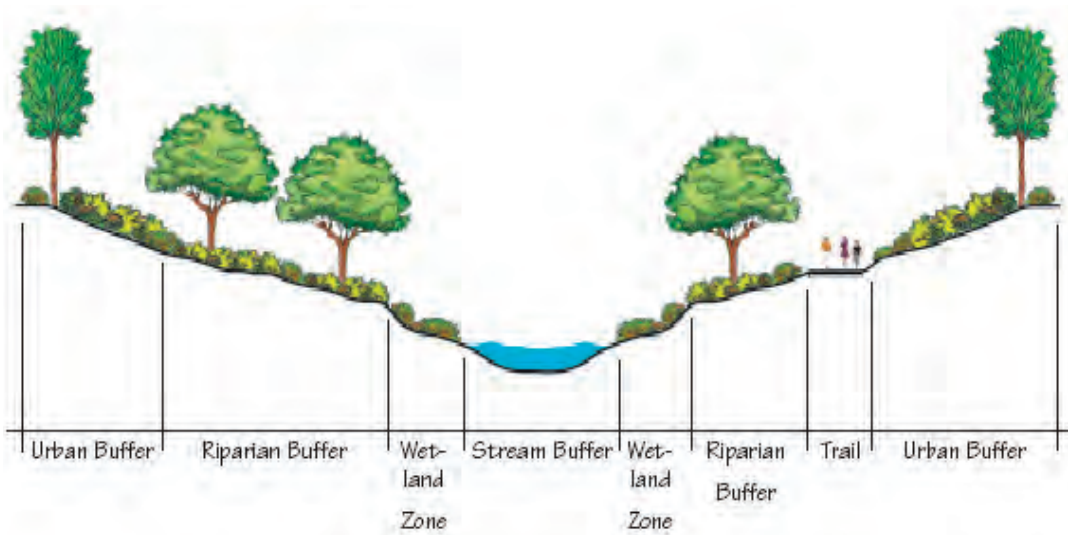
The mainline of the MST and the connecting town trails will consist of a minimum 10-foot wide, paved multi-use trail, with 18-inch crushed-stone shoulders on each side. This designation applies for the following reasons:

- Anticipated high-use of the trails;
- Use of the trail as a transportation route;
- Much of the trail lies within the floodplain; and
- The trail connects with urban settings and a growing population base.

Several user groups, such as bicyclists, joggers, wheelchair users, and rollerbladers, will require the designated paved surface (10 to 12 feet wide). Although asphalt is the most common paved surface used for greenway trails, concrete is best for areas experiencing frequent flooding. Portions of trail that contain environmentally sensitive areas may require more natural surfacing options.

*An example of a 10' Paved Multi-Use Trail.*





*Typical Greenway  
Corridor with  
Stream Buffer*

#### *On-Road Trails (sidewalks and bikeways,*

This designation would apply to corridors in the Downtown Areas of Clayton and Smithfield, where off-road options are not possible. These corridors will function as connections between the off-road trails and major origins and destinations of the towns, allowing them to benefit from potential MST-related tourism. On-road trails will consist of minimum 5-foot wide sidewalks for pedestrian use and bikeways for cyclists. Bikeways can vary from 5-foot wide bicycle lanes (complete with pavement striping and signage) to 4-foot wide paved roadway shoulders to a 14-foot wide curb lane (to be shared by cyclists and motorists). The bikeways identified for Downtown Clayton and Smithfield will likely consist of signed, shared roadways, where cyclists are able to share the road with lower traffic speeds and volumes.

#### *Multi-Use Unpaved Trails*

For the near-term development of some town trails, it may be more financially feasible to start with some unpaved sections (although at least one trail in each town should be paved immediately that connects to the MST). These non-paved trails could be slated for future paving, as additional funding becomes available. The unpaved trails could be surfaced with gravel or crushed stone (10 to 12 feet wide) for use by several user groups, such as bicyclists, joggers, and equestrians. Wheelchair users and persons with strollers can use unpaved trails if they are designed to ADA standards and surfaced with compacted crushed stone.

#### *Water Based Trail*

The MST Blueway for Johnston County will span the entire project corridor along the Neuse River. The designation of a water-based trail applies to the Neuse River because it can successfully accommodate and support canoeing, kayaking, and tubing. Water based trails can be designed with features and facilities that make this activity more enjoyable, including educational signage systems, improved rapids, safety systems, picnic areas, etc.



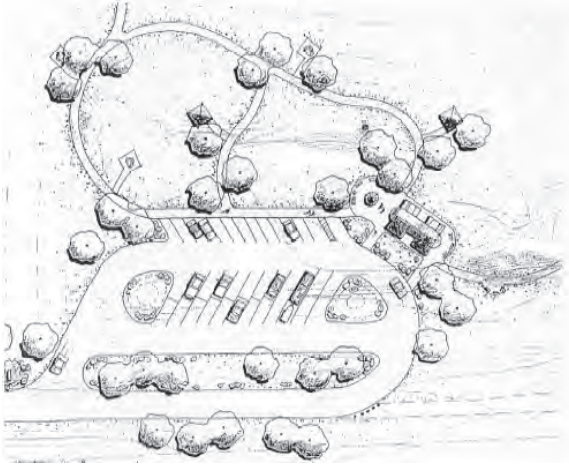
#### ***4.1.2 Paddle Trail Access Sites and Trailheads***

The North Carolina Department of Environment and Natural Resources (NC DENR) State Trails Program is developing standards for designated paddle (water-based) trail access sites. The following recommendations for Johnston County's MST water access sites (near Covered Bridge Road, NC 42, Fire Dept. Road, and Smithfield Town Commons) were derived from NC DENR's draft standards. These sites should provide the following:

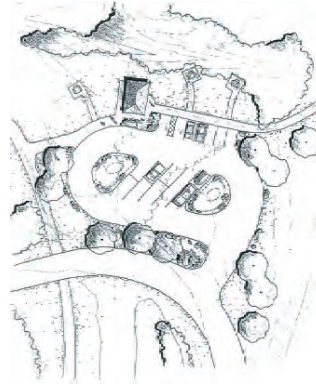
***Refer to Appendix B for  
Trail Design Guidelines***

- Natural but well maintained pathway from parking to water access
  - Pathway at least 6 feet wide
  - Grass not higher than 5 inches
  - Tree overhang not lower than 14 feet
  - Grade must not exceed 20%
- If a pathway from parking area to water access exceeds 1500 feet, a permanently affixed canoe or kayak stand must be positioned every 1000 feet
- A designated and well maintained parking site must be delineated by signs meeting NCDOT visibility requirements
- Digital pictures of the parking, pathway, and access areas must be displayed for reference on a publicly accessible website
- Website must display conditions of access site
  - 12-month log with bimonthly updates must be displayed at all times
  - 60-month data must be available upon request.
- Informational signs containing emergency contact numbers, as well as contact numbers for the managing partner, must be displayed
  - on the website
  - at the parking space area
  - within 150 feet of the access site
- Access waterway must be firm, compacted, and permanently delineated
- Minimum construction for facilities
- Seating at access
- Interpretive signs must be available
- Garbage cans must be permanently in place and trash must be removed a weekly basis
- Lights in parking and picnic areas must be available
- Maintenance staff for facility

### Major Trailhead Example



### Minor Trailhead Example

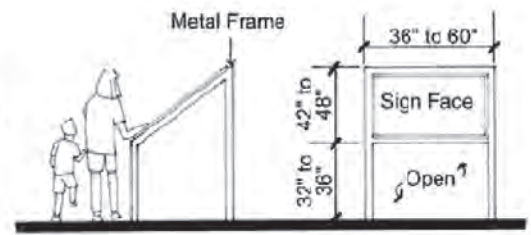
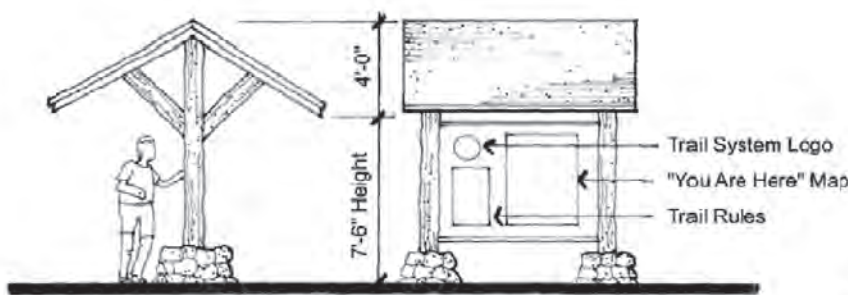


Major trailheads may provide more amenities, such as interpretive exhibits, restrooms, water fountains, picnic tables, parking, signage, etc. Minor trailheads contain fewer of these amenities, and can be used to connect a smaller number of people to surrounding trails, open space, and parks, etc.

#### 4.1.2 Trail Amenities Overview

- *Entry and Regulatory Signage* should be provided at trailheads, informing trail users of where they are, where they are going, and what the rules are. Safety tips and the direction of area destinations should be included in the wayfinding signage.
- *Interpretive Signage* should also be provided at major trailheads, offering a brief history of the area (Clayton, Smithfield, or Johnston County), the Neuse River, and/or the MST. These signs could also provide environmental education, including information on local plant and animal species found within the corridor (See page 13 for an example).

### Trailhead Information Installation Examples



### Example Wayfinding Signage



### Pole-mounted Signs (ink on reflective sign blanks)



CONFIRMATION



DESTINATION

- *Trash Receptacles.* At a minimum, 22-gallon or 32-gallon containers should be located at each entrance way and each seating area near the trail (benches and picnic tables). They should be accessible to both trail users and trail maintenance personnel, about 3- feet from the trail.
- *Benches* should be provided at trailheads, plus at the downtown entry/exit points. Additionally, certain locations along the trail may provide ideal settings for benches, such as in scenic areas, or at intervals between long stretches of trail.
- *MST Wayfinding Signage* should be provided along the mainline trail at 1) entry/exit points along the trail, 2) at major changes in direction, and 3) at major transitions in environment, such as from a greenway trail to a downtown sidewalk and bikeway.
- *Bollards* are intended to provide separation between vehicles and trail users. Removable bollards can be installed to provide trail access for emergency and maintenance vehicles. These should be located wherever there is potential for vehicles to enter the trail system: at each road crossing and at some trailheads (depending on site design).
- *Bike Racks* should be placed in both Downtown Clayton and Downtown Smithfield. Cyclists will be more inclined to explore these towns if they have a safe place to lock their bikes, within a convenient distance from a main pedestrian walkway.

### Pavement Marking Examples (cut-out thermoplastic shapes)



REINFORCEMENT



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DIRECTION CHANGE

**4.1.3 Total Trail Distance and Cost Estimates** (See Chapter 5 for further breakdown of these estimates)

<b>Demolition</b>		<b>Quantity</b>	<b>Cost / Unit</b>	<b>Subtotal</b>
<b>A</b>	Clearing and grubbing understory (20' wide)	2,522,540	\$0.25 sf	\$630,635.00
	Dumping Fees (6% of Demolition total)			\$37,838.10
	Demolition Total			<b>\$668,473.10</b>
<b>Site Development</b>		<b>Quantity</b>	<b>Cost / Unit</b>	<b>Subtotal</b>
<b>B Off-Road Facility 143,655 lf (27.2 miles)</b>				
1	Temporary tree protection/silt fence	143,655	\$4.00 lf	\$574,620.00
2	Trail grading (0-5 cu ft/lf)	143,655	\$3.00 lf	\$430,965.00
3	10' wide multi-use asphalt trail	143,655	\$35.00 lf	\$5,027,925.00
4	2' wide gravel shoulder (both sides)	287,310	\$6.00 lf	\$1,723,860.00
6	Bike/Ped Bridges	1,123	\$550.00 lf	\$617,650.00
7	Drainage culverts (36" reinforced concrete pipe)	2	\$40.00 lf	\$80.00
8	Seeding or mulching trail edges (5' both sides)	287,310	\$0.12 sf	\$34,477.20
<b>C On-Road Facility 15,840 lf (3 miles)</b>				
1	Pavement Bicycle Arrow Markings (thermoplastic)	142	\$60.00 ea	\$8,520.00
2	Crosswalks	46	\$500.00 ea	\$23,000.00
3	Sidewalk (5' wide)	38,655	\$3.00 sf	\$115,965.00
<b>D Utilities</b>				
1	Solar powered light	12	\$5,400.00 ea	\$64,800.00
2	Solar powered light pole	12	\$1,300.00 ea	\$15,600.00
3	Emergency phones	20	\$2,500.00 ea	\$50,000.00
<b>E Signage</b>				
1	Mile Markers	29	\$200.00 ea	\$5,800.00
2	Trail and street regulatory/warning signs	23	\$200.00 ea	\$4,600.00
3	Directional signs	26	\$200.00 ea	\$5,200.00
4	Educational signs	10	\$300.00 ea	\$3,000.00
<b>F Site Amenities</b>				
1	Benches	38	\$400.00 ea	\$15,200.00
2	Bicycle racks (holds 9 bikes)	7	\$400.00 ea	\$2,800.00
3	Drinking fountains	2	\$2,000.00 ea	\$4,000.00
4	Picnic tables/ tables	11	\$500.00 ea	\$5,500.00
5	Trash receptacles (32-gallon, steel)	4	\$250.00 ea	\$1,000.00
6	Bollards (3 per trail/road intersection)	15	\$300.00 ea	\$4,500.00
7	Parking (10-car lot)	2	\$20,000.00 ea	\$40,000.00
8	Parking (20-car lot)	1	\$50,000.00 ea	\$50,000.00
te Development Total				<b>\$8,164,442.20</b>
<b>Subtotals</b>				
<b>A Demolition</b>				<b>\$668,473.10</b>
<b>B Off-Road Facility</b>				<b>\$8,409,577.20</b>
<b>C On-Road Facility</b>				<b>\$147,485.00</b>
<b>D Utilities</b>				<b>\$130,400.00</b>
<b>E Signage</b>				<b>\$18,600.00</b>
<b>F Site Amenities</b>				<b>\$123,000.00</b>
<b>G Additional Costs*</b>				<b>\$284,673.00</b>
<b>SUBTOTAL</b>				<b>\$9,782,208.30</b>
<b>Contingency</b>			15%	<b>\$1,467,331.25</b>
<b>TOTAL</b>				<b>\$11,249,539.55</b>

\* 'Additional Costs' includes the proposed bike/ped bridge at Covered Bridge Road and the excavation and dumping fees for the replacement of trail at Smithfield Town Commons.

\*\*Does not include the following: construction staking, rock and unsuitable soils excavation, permitting fees, contractor overhead, profit, mobilization, bonds, taxes.



#### 4.1.4 Total Maintenance Cost Estimates

<b>Annual Trail Maintenance Breakdown (Based on National Averages)</b>	
Drainage and Storm Channel Maintenance	\$500 per mile
Sweeping/Blowing Debris off Trail Tread	\$1,200 per mile
Pickup and Removal of Trash	\$1,200 per mile
Weed Control and Vegetation Management	\$1,000 per mile
Mowing of 3-foot Grass Shoulder Along Trail	\$1,200 per mile
Minor Repairs to Trail Furniture/Safety Features	\$500 per mile
Maintenance Supplies for Work Crews	\$300 per mile
Equipment Fuel and Repairs	\$600 per mile
<b>Total Annual Maintenance Cost</b>	<b>\$6,500 per mile</b>
<b>27.2 Proposed Miles of Off-Road Trail x \$6,500 per mile =</b>	<b>\$176,800</b>

*\*Does not include On-Road Trail or Water-based Trail*

#### 4.1.5 Right-Of-Way Acquisition (See Chapter 5 for alternative conservation tools)

<b>Land Price Per Acre Johnston County</b>	
<b>Average Price per Acre (Farmland, Undeveloped, and Vacant)</b>	<b>\$11,874</b>
Total Off-Road Trail Length	= 143,655 feet
x 100 ft corridor width	= 14,365,500 sf
Converted to Acres	= 329.8 acres
<b>329.8 Acres x \$11,874 per Acre =</b>	<b>\$3,916,045</b>

*\*Average price per acre determined by a comparative market analysis. The analysis used information from the Triangle MLS (Multiple Listing Service) database and is believed to be accurate but not guaranteed. The report included forty-three closed land sales on 10+ acre parcels in Johnston County, from 6/20/2005 to 6/20/2006.*

*\*\*According to the Town of Smithfield Planning Department, average price per acre is closer to \$15,000, in which case the total would be \$4,947,000.*

## 4.2 Trail System by Section

The trail breaks down into the following sections: Northern Section, Upper Middle Section, Lower Middle Section, and Southern Section (Section names should be designated upon implementation to reflect local identity and preferences).

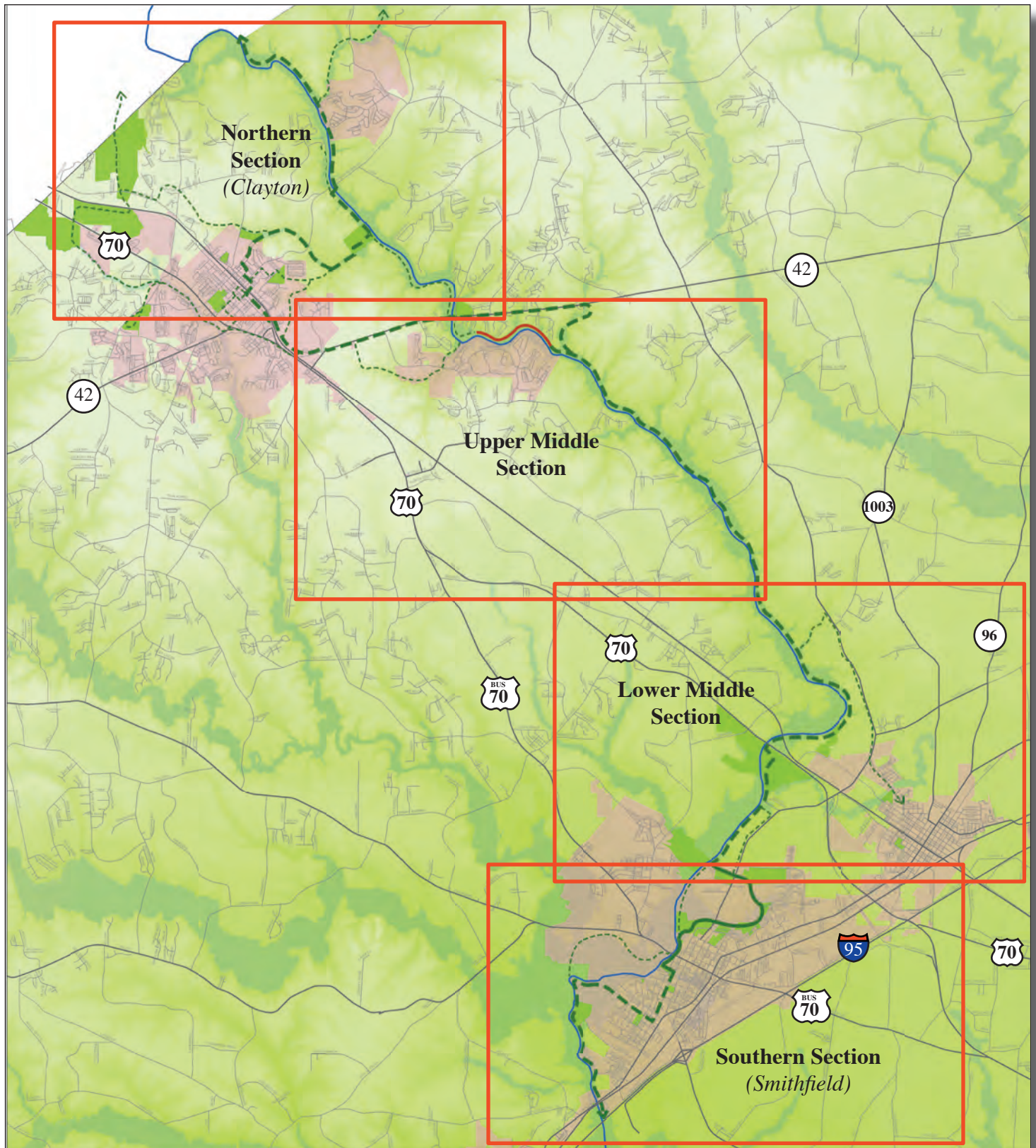
These sections are broken down further into twenty trail segments, outlined in Chapter 5: Implementation.

## MOUNTAINS-TO-SEA TRAIL

Trail distance calculations are outlined below for each section (on-road facilities included those recommended in Downtown Clayton and Downtown Smithfield). For the purposes of this MST plan, only the MST mainline and trails connecting directly into Smithfield and Clayton were included in these calculations.

Trail Sections: Approximate Distances		10' Wide Paved Multi-Use Trail	On-Road Trail (Signed sidewalks & bikeways)	Water-based Trail
Northern Section	<i>Feet</i>	55,635	9,360	31,300
	<i>Miles</i>	10.5	1.8	5.9
Upper Middle Section	<i>Feet</i>	30,635	0	29,000
	<i>Miles</i>	5.8	0	5.5
Lower Middle Section	<i>Feet</i>	36,725	0	39,000
	<i>Miles</i>	7.0	0	7.4
Southern Section	<i>Feet</i>	20,660	6,480	39,500
	<i>Miles</i>	3.9	1.2	7.5
Trail Type Totals	<i>Feet</i>	<b>143,655</b>	<b>15,840</b>	<b>138,800</b>
	<i>Miles</i>	<b>27.2</b>	<b>3.0</b>	<b>26.3</b>

\*Does not include existing trail or the Buffalo Creek Greenway.



## 4.2.1 NORTHERN SECTION

The Northern Section of the MST has many elements that will attract a variety of users. To the north, the trail will eventually draw users from the Raleigh Greenway system, and similarly, trail users from Johnston County will be able to connect directly to parks and other destinations in Wake County. Nearly the entire Northern Segment lies within a regional ‘Conservation Focus Area’. According to the Triangle Land Conservancy, the nearby Mark’s Creek Rural Lands are “the Triangle’s most unique and urgent land conservation opportunity.” (Triangle Land Conservancy, 2006)

### *Preferred Route and Alignment*

Starting at the Wake/Johnston county line, both sides of the Neuse River could connect the MST to Wake County and Raleigh’s greenway system. On the *west* side, the trails could connect through Clemmons State Forest, then to Downtown Clayton through an extension of the proposed Sam’s Branch Greenway.

On the *east* side of the River the MST will connect with the Mark’s Creek corridor. Also, the Town of Clayton has identified future town-owned property along the east side of the Neuse River, from the county line downstream, connecting with existing easements. The MST on the east side will continue downstream until reaching Covered Bridge Road, where the Town of Clayton proposes a covered bicycle and pedestrian bridge across the Neuse River (paralleling the automobile bridge). After crossing the Neuse, the trail would follow the river’s west bank downstream to a town-owned parcel that would serve as a trailhead for several town-trail connectors, including 1) Sam’s Branch Greenway, 2) a trail south of Sam’s Branch (tying into Clayton near Cooper Elementary), and 3) a trail that branches off before the school, south towards the intersection of NC 42 and US 70. This town-owned parcel will also serve as a water-based trailhead, offering a drop-in spot for canoes, kayaks and tubes.

Some sidewalks and roads in Downtown Clayton will be signed as part of the MST, so that bikers and hikers can navigate the Town from Sam’s Branch Greenway. Also, a bicycle and pedestrian side path has been proposed to follow NC 42 from US-70 (near Downtown) to Buffalo Road (along the south side of 42). The sidepath is proposed as part of the future NC 42 road widening.

### *Additional Clayton Trails will include the following:*

- A town trail will continue along the west side of the river, from the aforementioned town-owned parcel, to the NC 42 Bridge. This trail will run along the banks of the Neuse, or within a utility corridor that parallels the river, depending on feasibility.
- The Little Creek Greenway offers an opportunity for greater connectivity in Clayton, as does an extension to the Sam’s Branch Greenway.
- A trail near Glen Laurel Road, just south of NC 42, will connect an existing subdivision near the river to Downtown Clayton.



# RECOMMENDED TRAILS

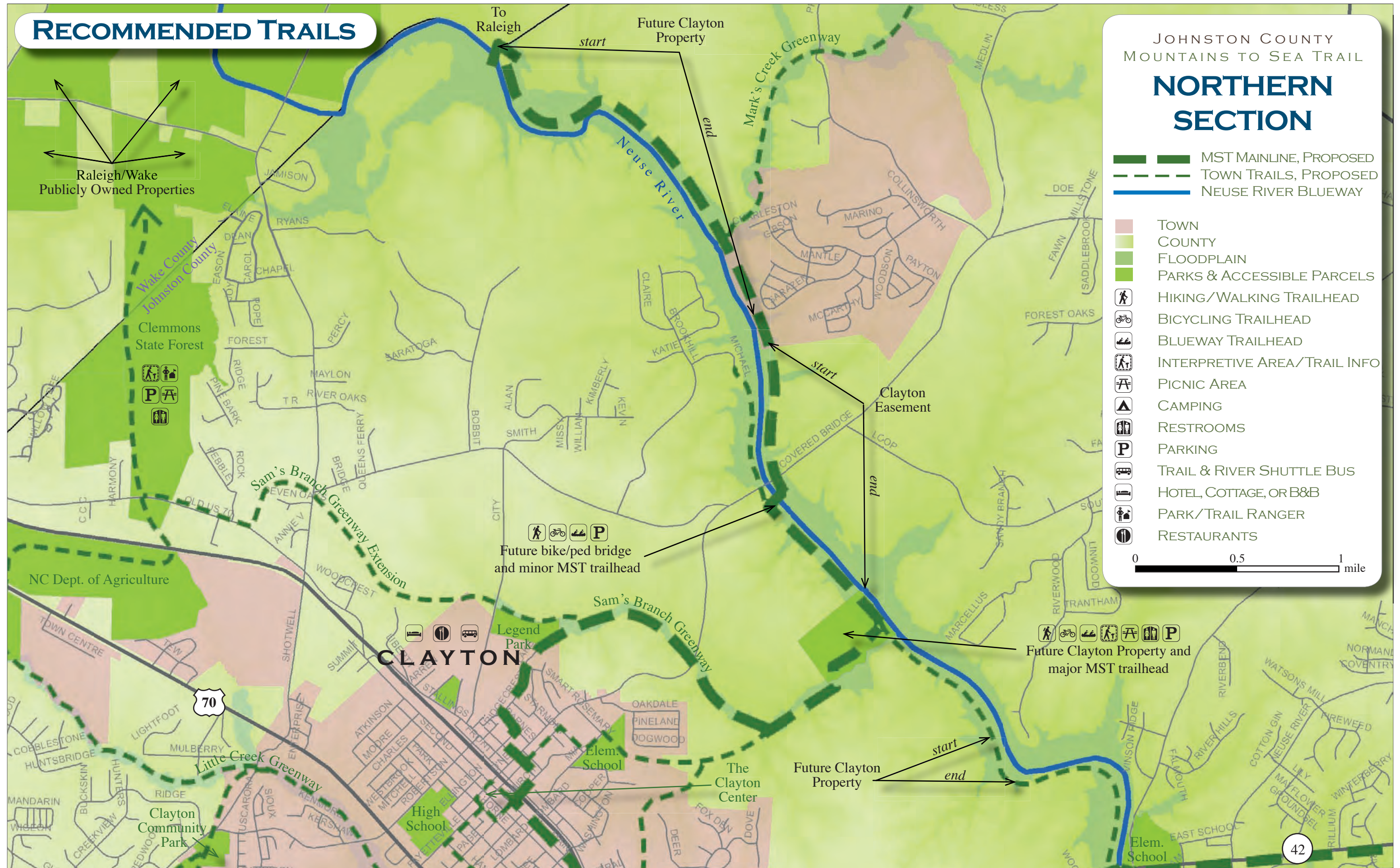
## JOHNSTON COUNTY MOUNTAINS TO SEA TRAIL

### NORTHERN SECTION

- MST MAINLINE, PROPOSED
- TOWN TRAILS, PROPOSED
- NEUSE RIVER BLUEWAY

- TOWN
- COUNTY
- FLOODPLAIN
- PARKS & ACCESSIBLE PARCELS
- HIKING/WALKING TRAILHEAD
- BICYCLING TRAILHEAD
- BLUEWAY TRAILHEAD
- INTERPRETIVE AREA/TRAIL INFO
- PICNIC AREA
- CAMPING
- RESTROOMS
- PARKING
- TRAIL & RIVER SHUTTLE BUS
- HOTEL, COTTAGE, OR B&B
- PARK/TRAIL RANGER
- RESTAURANTS

0 0.5 1 mile





*Local Attractions in the Northern and Upper Middle Segments*

Area attractions include, but are not limited to, the following:

- The Clemmons Educational State Forest, which is used as a living environmental education center, is located just outside of Clayton. Ranger-conducted programs are available to groups visiting the Forest and visitors will enjoy hiking and picnicking. An extension of Sam’s Branch greenway will eventually connect to this regional greenspace resource.
- The Clayton Center on Second Street is a premier cultural and performing arts destination for both locals and visitors alike. Since opening on New Year’s Eve 2002, over 50,000 people have come through the doors of The Clayton Center to enjoy a performance.
- The Coffee Mill on S Lombard Street is a Town of Clayton destination that may be attractive to trail users. The shop also features local artists and musicians.
- The Morning Glory Inn, on East Second Street is an example of Clayton’s unique and authentic options for lodging. Inns such as these could be an attraction to MST trail users, and conversely, the trail can serve as an attraction to those staying in town.

**4.2 UPPER MIDDLE SECTION**

*Preferred Route and Alignment*

There are several pending options for the MST at the NC 42 bridge. If public access is granted or negotiated through the existing private trail to the south, then the trail will pass under the NC 42 bridge and connect to the existing trail. If public access is not granted or negotiated, then the trail will become an on-road or side-path facility that runs along NC 42 East for nearly 2 miles, as proposed in the MST 2004 Conceptual Plan. The trail would then follow a floodplain and creek back to the Neuse River, south of the existing subdivision.

The MST continues downstream through mainly agricultural land uses. However, some subdivision construction has already begun in portions of this segment. Steps should be taken immediately to negotiate or ensure public access through new developments.


The Johnston County MST’s most important river access opportunity exists at the Fire Department Road (aka Wilson Road) Bridge. The northern quadrant at the intersection of the river and bridge provides a clear and level area for construction of trailhead parking and related improvements. This location is important because it lies directly in between existing water access points, providing a much needed midway entry and exit point along the Neuse. Such a trailhead would substantially increase the ‘Blueway’s” marketability and accessibility for new and/or novice water-based trail users. A long access road will be required, as the approach to the bridge itself does not currently provide access to the riverbank.



[illegible]

## UPPER MIDDLE SECTION

0 0.5 1 mile



Proposed major MST trailhead  
at Fire Dept. Road Bridge

TOWN  
COUNTY  
FLOODPLAIN  
PARKS & ACCESSIBLE PARCELS  
HIKING/WALKING TRAILHEAD  
BICYCLING TRAILHEAD  
BLUEWAY TRAILHEAD  
INTERPRETIVE AREA/TRAIL INFO  
PICNIC AREA  
RESTROOMS  
PARKING  
TRAIL & RIVER SHUTTLE BUS  
HOTEL, COTTAGE, OR B&B  
RESTAURANTS



### 4.3 LOWER MIDDLE SECTION

*Preferred Route and Alignment*

South of Fire Department Road bridge, the MST continues through primarily agricultural areas, crossing only three large parcels for more that two miles. After this stretch, some existing corridors may guide specific trail alignment. Two large utility easements, one, sewer, and one power cross this section of the MST and could provide connections to Buffalo Road, should they become useful with future growth.

As the trail continues southward, the land use transitions into a low-density residential area, with some agricultural uses. As the MST approaches US-70, it crosses through an NCDOT parcel, and into and industrial area. Connections to the Town of Selma are limited due to the large tank farms separating the town from the river, though the aforementioned utility corridors to the north may provide access via Buffalo road.

The MST would travel under the railroad bridge, under the US-70 bridge, and into a large NCDOT parcel. At this point the trail could continue in two directions: 1) as preferred, along the Neuse River, or 2) along and alternate route, in the form of a sidepath along Buffalo Road. When the Town of Smithfield and NCDOT widen this portion of Buffalo Road, a sidepath on the westside should be provided in the plans as an alternate route for the MST, should the river-side route not become available. Each of these two options lead to the northernmost portion of the Buffalo Creek Greenway, and into the Southern Section of the MST.

*Local Attractions in the Lower Middle and Southern Sections*

Area attractions include, but are not limited to, the following:

- Downtown Selma: Over 25 antique stores line the streets of Uptown Selma.
- The Smithfield Community Park, when completed will offer: 2 tot lots, 2 sand volleyball courts, 4 lighted tennis courts, 3 lighted softball fields, 2 horseshoe courts, 3 picnic shelters w/tables & grills, 1 baseball field, 2 basketball courts, 2 youth soccer fields, interpretive nature trail, concession/restroom building, 8-10 fitness stations, lighted SR. league baseball field, lighted youth football/multipurpose field, Double batting cage facility, lighted pair of tennis courts, 7000 lf of walking trail, associated driveway and parking areas.
- Downtown Smithfield offers the Johnston County Heritage Center, the Ava Gardner Museum, and a host of shops and restaurants.
- Smithfield Town Commons includes a five block nature park along the Neuse River with nature trails, picnic tables, a boat ramp, an amphitheater, and a Boy Scout hut.
- A (potential) Native American Interpretive Area is located south of the Smithfield’s sewer plant and north of I-95 on the east side of the River. The site is not yet designated as culturally or historically significant, but Town of Smithfield officials claim it is worth further study as an interpretive area.



# RECOMMENDED TRAILS

JOHNSTON COUNTY  
MOUNTAINS TO SEA TRAIL

LOWER MIDDLE  
SECTION

MST MAINLINE, EXISTING

MST MAINLINE, PROPOSED

TOWN TRAILS, PROPOSED

NEUSE RIVER BLUEWAY

TOWN

COUNTY

FLOODPLAIN

PARKS & ACCESSIBLE PARCELS

HIKING/WALKING TRAILHEAD

BICYCLING TRAILHEAD

INTERPRETIVE AREA/TRAIL INFO

PICNIC AREA

RESTROOMS

PARKING

HOTEL, COTTAGE, OR B&B

RESTAURANTS

0

0.5

1

mile

This map illustrates the Lower Middle Section of the Johnston County Mountains to Sea Trail. It features the Neuse River flowing through the landscape, with the Buffalo Road and its associated sidepath running parallel to it. The map delineates various land use zones, including town areas (Smithfield and Selma), county land, floodplains, and parks/accessible parcels. Several NCDOT parcels are also identified. The trail system is shown with existing mainline (solid green), proposed mainline (dashed green), and proposed town trails (dotted green). The Neuse River Blueway is highlighted in blue. A legend in the top right corner provides a key for the trail types and symbols for various facilities like trailheads, picnic areas, restrooms, and parking. A scale bar at the bottom right indicates distances of 0, 0.5, and 1 mile. An annotation with an arrow points to a spur trail near Selma, noting it was originally proposed in the 2004 MST-East Plan. Major roads shown include US-70, US-1003, and NC-96. The Town of Smithfield and the City of Selma are clearly labeled, along with various local streets and landmarks like the Dept. of Corrections and Smithfield Community Park & SSS High School.

RECOMMENDED TRAIL SYSTEM 47



## 4.4 SOUTHERN SECTION

### *Preferred Route and Alignment*

For the Southern Section, the MST starts by following the Buffalo Creek Greenway. The northernmost portion of the Buffalo Creek Greenway begins at a Middle School and Smithfield Community Park. An at-grade crossing will connect the greenway from the school to the park, across Buffalo Road. From the park, the greenway will travel through easements along the Buffalo Creek floodplain, bordering some residential areas to the south and east. Roughly half way through the 3-mile greenway, it connects to two more parks: Bingham Park and Talton Park. This portion of the trail also connects to a hospital and more residential areas near the parks.

From Talton Park, the greenway travels about a half-mile towards the Neuse River where it connects to the Smithfield Town Commons. From here, access to Downtown Smithfield is easily available through existing sidewalks.

An alternate route to the Buffalo Creek Greenway is along the Neuse River, from the Middle School to Smithfield Town Commons. This is less of a priority since the Buffalo Creek Greenway is already planned, programmed, and almost entirely funded. The alternate route, however would provide a ‘loop’ for Smithfield trail users to exercise, recreate, and in some cases, commute.

From Smithfield Town Commons, the Buffalo Creek Greenway ends, and the MST follows the Neuse River to Wallace Park, where it transitions to an On-Road trail (sidewalks and bikeways). The on-road portion of the MST in Smithfield travels along Second Street from Wallace Park, past Johnston County’s School for the Academically Gifted (AG School), then down to Sanders Street. At Sanders Street the on-road trail heads west, back towards the river, passing by an Elementary School. This on-road system is through a residential area with low-volume traffic for bicyclists and existing sidewalks (on Second Street) for pedestrians. MST signage will direct trail users back to the paved multiuse trail along the Neuse River.

Once back on the Neuse, the trail follows the river downstream past a sewer plant and to a potential interpretive area for Native American culture and natural springs. If this site proves to be feasible for interpretation, it may be a desirable end point for the trail in the near-term, rather than at the more industrial project boundary of I-95.

\*Trails in the Town of Clayton and the Town of Smithfield are shown on page 48 for reference.



[illegible]

## SOUTHERN SECTION

	TOWN
	COUNTY
	FLOODPLAIN
	PARKS & ACCESSIBLE PARCELS
	HIKING/WALKING TRAILHEAD
	BICYCLING TRAILHEAD
	BLUEWAY TRAILHEAD
	INTERPRETIVE AREA/TRAIL INFO
	PICNIC AREA
	CAMPING
	RESTROOMS
	PARKING
	TRAIL & RIVER SHUTTLE BUS
	HOTEL, COTTAGE, OR B&B
	PARK/TRAIL RANGER
	RESTAURANTS
	AMPHITHEATER
	BOAT RAMP



